LETTER TO THE EDITOR

Testing for CYP2C9 Before Initiating Anticoagulant Therapy

To the Editor:—Should we test for CYP2C9 before initiating anticoagulant therapy in patients with atrial fibrillation? The answer to the question[1] is "yes", and we should also test for other risk factors predisposing to anticoagulant-related intracerebral haemorrhage (ICH), including the ApoE genotype, which is a marker for cerebral amyloid angiopathy, and, hence, increased risk of warfarin-related ICH.[2] Other modalities for risk profiling include magnetic resonance imaging (MR), given the association between cerebral microbleeds and recurrent haemorrhagic stroke in patients treated with warfarin (odds ratio 7.383, 95% confidence interval 1.052 to 51.830) following ischaemic stroke.[3] Computerised tomography, on the other hand, can be utilised for identifying leukoairosis, an independent risk factor for warfarin-related ICH (odds ratio 8.4, 95% CI 1.4–51.5) in patients with previous ischaemic stroke.[4] Therapeutic options that can be utilised for patients at high risk of warfarin-related intracranial haemorrhage include not only aspirin,[1] but also antiarrhythmic therapy for atrial fibrillation (AF), using either catheter ablation[5] with the attendant 0.98 per 1,000 mortality risk[6] or amiodarone,[7] the former being by far the more successful modality for maintenance of sinus rhythm.[5] Amiodarone, however, is associated with a lower rate of treatment-related fatality, although requiring great vigilance for drug-related toxicity.[7] Therapeutic options to reduce haemorrhagic risk also include low-intensity anticoagulation with target INR in the range of 1.5–2.7 or 1.4–2.8.[8]

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REFERENCES

1. **Eckman MH, Greenberg SM, Rosand J.** Should we test for CYP2C9 before initiating anticoagulant therapy in patients with atrial fibrillation. J Gen Intern Med. 2009;24:543–9.
2. **Rosand J, Hylek EM, O'Donnell HC, Greenberg SM.** Warfarin-associated hemorrhage and cerebral amyloid angiopathy. Neurology. 2000;55:947–51.
3. **Ueno H, Naka H, Ohshita T, et al.** Association between cerebral microbleeds on T2-weighted MR images and recurrent hemorrhagic stroke in patients treated with warfarin following ischemic stroke. AJNR Am J Neuroradiol. 2008;29:1483–6.
4. **Smith EE, Rosand J, Knudsen KA, Hylek EM, Greenberg SM.** Leukoaraiosis is associated with warfarin-related hemorrhage following ischemic stroke. Neurology. 2002;59:193–7.
5. **Noheria A, Kumar A, Wylie JV, Josephson ME.** Catheter ablation vs antiarrhythmic drug therapy for persistent atrial fibrillation. Arch Intern Med. 2008;168:581–6.
6. **Cappato R, Calkins H, Chen S-H, et al.** Prevalence and causes of fatal outcome in catheter ablation of atrial fibrillation. J Am Coll Cardiol. 2009; 53: 1798–803.
7. **Doyle JF, Ho KM.** Benefits and risks of long-term amiodarone therapy for persistent atrial fibrillation; a meta-analysis. Mayo Clin Proc. 2009;84:234–42.
8. **Jolobe OMP.** Intensity of anticoagulation in the octogenarian with nonvalvular atrial fibrillation(letter). J Am Geriatr Soc. 2008;56:1967–8.

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